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8-12-14
03:56 PM

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

August 12, 2014

Agenda ID #13235
Quasi-Legislative

TO PARTIES OF RECORD IN RULEMAKING 12-11-005:

This is the proposed decision of Commissioner Michael R. Peevey. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's September 11, 2014 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

/s/ TIMOTHY J. SULLIVAN

Timothy J. Sullivan
Chief Administrative Law Judge (Acting)

TJS:vm2

Attachment

Decision **PROPOSED DECISION OF COMMISSIONER PEEVEY**
(Mailed 8/12/14)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding
Policies, Procedures and Rules for the
California Solar Initiative, the Self-
Generation Incentive Program and Other
Distributed Generation Issues.

Rulemaking 12-11-005
(Filed November 8, 2012)

**DECISION TO TRANSFER RESPONSIBILITY FOR COLLECTING SOLAR
STATISTICS FROM THE CALIFORNIA SOLAR INITIATIVE TO THE NET
ENERGY METERING INTERCONNECTION PROCESS**

Table of Contents

Title	Page
DECISION TO TRANSFER RESPONSIBILITY FOR COLLECTING SOLAR STATISTICS FROM THE CALIFORNIA SOLAR INITIATIVE TO THE NET ENERGY METERING INTERCONNECTION PROCESS	2
Summary	2
1. Background	2
2. Policy issues.....	4
3.1. The purpose of publishing the data	5
3.2. The Cost of Supplying additional data	6
3.3. NEM application	6
3.4. Uniformity of NEM processing:	9
3.5. Contract submission and data validation:	10
3.6. Customer Privacy	10
3.7. Expected Performance Based Buydown (EPBB) Calculator	12
3. Data Fields to Collect and Post.....	12
4.. Future Modification to Reporting Requirements	19
5. Implementing this decision	19
6. Comments on Proposed Decision	19
7. Assignment of Proceeding	20
ORDER	24

DECISION TO TRANSFER RESPONSIBILITY FOR COLLECTING SOLAR STATISTICS FROM THE CALIFORNIA SOLAR INITIATIVE TO THE NET ENERGY METERING INTERCONNECTION PROCESS**Summary**

The California Solar Initiative (CSI) application process currently collects valuable data about customer-sited solar photovoltaic systems. As the CSI incentive funds are depleted, an increasing share of customer-sited renewable generation facilities will be installed without going through the CSI application process. This decision orders the investor-owned electric utilities to update the customer Net Energy Metering (NEM) interconnection application requirements to include additional data fields. This decision also orders the electric utilities to transfer this data to the California Solar Statistics contractor (currently Energy Solutions) on a regular basis for processing and posting to the California Solar Statistics website. Finally, it orders the utilities that have not done so to establish an online NEM application process.

1. Background

The California Public Utilities Commission (Commission) established the California Solar Initiative (CSI) in 2006, to provide \$3.2 billion in incentives and other support for solar photovoltaic (PV) systems with the goal of installing 3,000 megawatts (MW) in the service territories of California's three large investor-owned electric utilities. The Legislature codified the program, adjusted the program's scope and adjusted the Commission's portion of the total cost of the program to \$2.17 billion later that year. The Commission subsequently modified the CSI program to be consistent with Senate Bill (SB) 1, including a

limit of \$100.8 million for incentives to solar thermal technologies.¹ The program launched to the public on January 1, 2007.²

When customers apply for CSI rebates, the application requires applicants to provide certain information, including whether systems are leased or owned, the cost of systems and their components, make and model of the PV panels and inverters, whether tracking hardware is present, and the orientation of fixed-array PV panels. These data are collected by Power Clerk, the online application system for the CSI program. The California Solar Statistics contractor downloads these data and, after additional data quality control and processing, posts them to the California Solar Statistics website on a weekly basis.

The data collected for California Solar Statistics provide invaluable information to the Commission, the Program Administrators (PAs), market participants, researchers and the general public related to the system characteristics, cost and expected performance of customer-sited PV systems. Among other benefits, the data help utility planners understand the grid and resource impacts of these distributed generation fleets. As CSI incentive budgets are depleted, the PAs will reach a point, or have already reached the point, where they cease accepting CSI applications. It is vital that these data not be lost as the CSI program winds down.

On August 22, 2013, the assigned Commissioner issued an Assigned Commissioner's Ruling (ACR) on the topic of this decision. The ACR:

¹ See Pub. Util. Code § 2851(b).

² SB 585 added \$200 million to the incentives budget, so that the total CSI budget is now \$2.37 billion.

1. Proposed certain minimum reporting requirements, listed data that would need to be provided by the utilities, and also the fields that would be published on the California Solar Statistics website.
2. Stated the Commission's intention to require the utilities to compile these data and transfer them to the California Solar Statistics contractor for processing and posting on the California Solar Statistics website.
3. Encouraged the utilities to streamline and automate the collection and transfer of the data; and
4. Noted that funding for the data processing and publication is currently available from the CSI program.

The Sierra Club, Southern California Edison (SCE), the Office of Ratepayer Advocates (ORA),³ San Diego Gas and Electric Company (SDG&E), Pacific Gas and Electric Company (PG&E), SolarCity Corporation (SolarCity), the California Center for Sustainable Energy (CCSE), the California Solar Energy Industries Association (CALSEIA) the Solar Energy Industries Association (SEIA), Distributed Energy Consumer Advocates (DECA), and the Clean Coalition timely filed comments on September 9, 2014. On September 16, 2014, CALSEIA, SolarCity, PG&E, SCE, CCSE, and ORA timely filed reply comments. In addition to discussing which fields should be collected on the Net Energy Metering (NEM) forms and which fields should be published, parties also raised other issues, including customer confidentiality and common reporting formats.

2. Policy Issues

In both comments and replies to the ACR, parties raised a variety of issues. These comments highlighted the need to maintain customer privacy and a streamlined application process which does not create unnecessary impediments

³ Name of the Division of Ratepayers Advocates was changed to the Office of Ratepayer Advocates.

to interconnection. While the Commission understands the policy and implementation concerns shared by several parties, we feel that continuing to support a publicly-available data set is vital to the continued growth of the industry. The specific policy issues raised by parties are addressed below, by topic.

2.1. The Purpose of Publishing the Data

The investor-owned utilities (IOUs) and SolarCity raised objections to publishing certain data fields. SolarCity complains that the ACR proposes to increase both the complexity and cost of interconnection by requiring additional information which it estimates provides limited or questionable value. SolarCity asks the Commission to reconsider whether to add certain proposed data fields, including: the sale price for third-party owned systems; the name of owner at the time of sale for third-party owned systems; PACE funding if the system is customer-owned; vendor for system output monitoring; tilt and azimuth if fixed system; number of inverters and inverter manufacturer and model; number of panels, and panel manufacturer and model; capacity in Direct Current (DC) watts and in alternating current (AC) watts; and whether electric vehicles (EVs) are charging on-site and number of EVs. PG&E and SDGE argue that data not necessary for NEM or interconnection should be provided by customers on a voluntary basis. The IOUs also raise concerns regarding privacy and negatively impacting interconnection that will be addressed in greater detail below.

The Commission understands parties' concerns; however, the Commission finds that the objections to publishing certain data fields were based on a narrow understanding of the data's purpose. Rather than having a single purpose, we hold that publishing these data serves multiple goals. First, it provides market suppliers (manufacturers, contractor, and investors) with information about

what equipment is being installed where and for how much. Second, it provides distributed generation (DG) host customers with information about which contractors are active in their area and at what price. Third, it provides academic researchers and journalists with vital information about the progress of the industry. Fourth, it helps utilities to understand the nature of their DG fleet and its impact on the grid and on needed resources. And fifth, it informs the Commission and state government policy-makers about new technologies and market models, enabling them to intelligently modify existing programs and design future programs.

2.2. The Cost of Supplying Additional Data

SolarCity, SDG&E, and PG&E objected to certain fields on the basis of cost, either for the applicant or for the utility. Though no specific breakdown is provided, SolarCity estimates that these additional reporting requirements would add \$7 to \$22 per application.

Although the Commission is concerned about raising costs, we believe that the value of reporting this information significantly outweighs the incremental cost of complying with the reporting requirement, from both the utility and the applicant sides. Additionally, this represents a very small fraction of a typical solar system's cost.

2.3. NEM Application

The ACR proposed that the utility interconnection departments collect the post-CSI discussed herein via the NEM application forms that customers fill out

when they apply to interconnect with the utility. No party argued against this basic approach, and we will herein adopt it.⁴

Size and technology restrictions:

The NEM tariff is limited to DG installations of less than one MW. This decision thus does not apply to DG interconnections of greater than one MW.

The NEM tariff is available for a broad range of renewable generation technologies. The utility interconnection forms already require applicants to identify their generation technology. Because the focus of this decision is solar, and because the vast majority of NEM DG is solar, the requirements that we lay out in this decision will focus on solar DG. Because solar PV has a large potential for being paired with electric vehicles and with storage, the questionnaire that interconnection customers will fill out will include queries about these other two technologies.

Online NEM application:

Each of the three IOUs subject to this decision already has an established NEM application process. SDG&E has already set up and is operating an online NEM application process, which includes both a customer-facing online application and a behind-the-scenes, centralized NEM tariff and interconnection screening tool for SDG&E's internal use in processing NEM applications. SDG&E has found that having an online application process has provided

⁴ We will note, however, that in theory, DG applicants can operate their equipment without the benefit of the NEM tariff. In practice, the vast majority of small (less than one MW) DG host customers do sign up for the NEM tariff, and so this decision will restrict itself to NEM application requirements.

immense savings that have quickly paid for the initial investment.⁵ In addition, DG applicants to the SDG&E grid enjoy a much speedier approval process than applicants to the other two utilities. SDG&E also reported that the tool enabled utility personnel to answer Energy Division interconnection data requests with minimal person-hours and a high degree of accuracy. In addition to these reasons, we believe that having an online application process will help ensure the accuracy of reported data and will facilitate the transfer of data to the contractor tasked with publishing interconnection data. For these reasons, we will require that SCE and PG&E work to expeditiously establish an online application process, backed up by appropriate tools for the utility's internal work flow management and decision-making, for NEM and other customer-sited generation applications.⁶ As SDG&E has already developed and implemented such a system, we urge SCE and PG&E not to reinvent the wheel but to pursue existing products or packages.⁷ To the extent that SDG&E wishes to enhance its system, it may propose such enhancements pursuant to the process set out below. To pay for the expenditures arising from setting up these systems, SCE

⁵ From remarks made by the SDG&E representative at a conference hosted by SDG&E on October 11, 2013, attended by representatives of SCE, PG&E, Energy Division, and ORA.

⁶ *Ibid.*

⁷ While this Decision applies to customer-sited interconnection applications, we strongly urge the utilities to use funds efficiently and implement a technology platform that can later be modified to be used for the broader universe of interconnection applications, including but not limited to exporting generation, standalone storage, storage paired with generation, and wholesale customers.

and PG&E shall use CSI program administration funds, which are not expected to be necessary for future program administration.⁸

2.4. Uniformity of NEM Processing

CCSE, CALSEIA, and Solar City all highlighted the benefits of a single, state-wide web-based application portal, potentially based on SDG&E's existing platform. Energy Division required the three Program Administrators to establish one interface/database (i.e. PowerClerk) in administering the CSI Program, which CCSE argues should be used as a model. We recognize that uniformity is attractive to NEM applicants who would thereby have just one interface to accustom themselves to. Therefore, we will order the three IOUs to work together to create one single statewide NEM interconnection interface, possibly adopting the system, which SDG&E has already put into place for its territory.

The IOUs shall transfer the data to the California Solar Statistics contractor (currently Energy Solutions) on a regular basis for processing and posting to the California Solar Statistics website. The IOUs may transfer the data on a monthly basis until the automated interface is completed for all three IOUs. Upon implementation of the automated interface, the IOUs shall transfer the data no less frequently than weekly.

⁸ For example, there are funds now available in the CSI PAs' Measurement and Evaluation budgets that could support this additional activity. These budgets now have a fund of nearly \$2 million (see August 2, 2013 CSI M&E Plan), which should be well in excess of what is needed to comply with this decision.

2.5. Contract Submission and Data Validation

CCSE and CALSEIA requested that NEM applicants be required to submit the contracts for either the purchase of a system or for the lease or purchase power agreement, so that an IOU (or the Commission) could validate the terms for accuracy.

While a detailed review of contracts will likely ensure a more accurate database, we find that there are several reasons not to require the submission of contracts by the applicants or the validation of data by the utilities. First, it may present a deterrent to NEM participation, as host customers may object and third-party owners who do not wish to share this detailed financial information with the utility may also object. Second, the IOUs will object to the significant extra work and cost involved in reviewing contracts. We find that these factors outweigh the advantages of requiring the submission of contracts and the validation of data, and so we will not require them.

2.6. Customer Privacy

PG&E, SDG&E, and SCE expressed reservations about the Commission's intention to continue the release of DG system data from NEM applications. SDG&E is concerned that the proposed data collection fields do not appear reasonable and necessary for the provision of utility services under the interconnection and NEM tariffs and as a result the Commission may run afoul of relevant state and federal law concerning the protection of customers' privacy.

PG&E implicitly argues that this data is tantamount to customer usage data and thus should be subject to the “15/15 Rule.”⁹

Customer confidentiality is an on-going concern to the Commission, to customers, and to the utilities. In the CSI Program we protect the anonymity of participants by redacting their names and street addresses in the data that is published in the Working Data Set (WDS). Furthermore, the “15/15 Rule” is not a rule but a tool that the utilities use to reach a level of aggregation that they are comfortable with. It is a tool that was deemed applicable to the Direct Access Proceeding¹⁰ for the limited purposes of a settlement, and it is not a general rule that is legally applicable across the board.

Second, the WDS, contains neither customer name nor address, but does indeed provide information about distributed generation installations. The fields in question are not considered confidential or private, and neither are the data that will be collected in the NEM application process.¹¹

The IOUs also recommended that the Commission make the provision of certain kinds of data optional. However, for reasons stated earlier, we find great value in the publication of data from all NEM customers, and not only those who opt to provide this information. Therefore, all NEM applicants will be required to allow their anonymized generation system data (including Zip code and city,

⁹ The “15/15 Rule” is a screen that requires that any aggregated customer-confidential information provided by the utilities be made up of at least fifteen customers, and that a single customer’s load be less than fifteen percent of an assigned category. This tool was established in the Direct Access Proceeding via Decision (D.97-10-031).

¹⁰ Decision (D.97-10-031).

¹¹ The Smart Grid Rulemaking addressing privacy issues deals with usage information obtained through the Advanced Metering Infrastructure – clearly, the information provided in the WDS does not fall into that category.

but redacting name and street address) to be made public in the same manner that CSI applicants have to date.

2.7. Expected Performance Based Buydown (EPBB) Calculator

In their comments, SCE, CALSEIA, and CCSE requested that the annual energy output for DG systems, as estimated by the EPBB Calculator,¹² be a required input on NEM applications. We agree with this suggestion. The EPBB Calculator is a free online tool that estimates the annual energy production for a given location, orientation, level of shading, roof offset, and set of equipment. These data in fact are not difficult to gather or to input. The output from running the program provides the host customer with a specific estimate of production at that location. We find that having this information will serve to protect customers against uneconomic installations by forcing system installers to clearly and explicitly state the assumptions going into the process of deciding whether or not to install a rooftop system. Therefore, we require that all three utilities integrate the EPBB Calculator into their online NEM application process.

3. Data Fields to Collect and Post

NEM interconnection application forms collect some system data although the forms are not uniform across the utilities, and no utility's interconnection form includes all of the system data fields currently collected in the CSI rebate applications. The ACR proposed to establish certain minimum reporting requirements related to interconnection data, and proposed a list of fields to be collected from customers and a list of fields that would be posted to the

¹² The EPBB Calculator is driven by the National Renewable Energy Lab's (NREL's) PV Watts v.2 calculator and is available here (<http://www.csi-epbb.com/default.aspx>)

California Solar Statistics website. All parties who submitted comments provided input on the data fields the ACR proposed to collect and the data that the ACR proposed to be posted. PG&E, SolarCity, SDG&E ask for fewer data fields, while CCSE, the Sierra Club, SEIA, and the Clean Coalition argue for different or additional data fields to be required.

The fields chosen herein are those which will assist the Commission, the utilities, researchers, property owners, and market participants to understand the characteristics of the fleet of solar DG installations. The following table contains our current list of requirements as defined in this Decision.

Table 1: Data fields to be provided by customers and by utilities, and those to be published.

Field	Supplied by applicant	Supplied by utility	Published on California Solar Statistics and the Working Data Set
Customer name and address	X	X	
Meter number		X	
Utility account number	X	X	
Electric tariff (prior to NEM)		X	
Customer zip, city, county	X	X	X
Name of utility		X	X
Customer sector (res/comm/ind/non-profit/educational/military/other government)	X		X
Installer name, address, email, and phone number	X		X
Contractor CSLB number	X		X
Participating in California rebate program? If so which program? Amount of rebate?	X		X
Date of interconnection application, date of approval by IOU		X	X
Customer-owned or third party-owned?	X		X
Sale price if host customer-owned. Federal	X		X

ITC filed amount if third party-owned			
Permitting cost	X		X
If customer-owned, was it PACE financed? If so, which?	X		X
If third party-owned, then name of owner at time of sale.	X		X
If third party-owned, then contract type (PPA/lease/pre-paid lease/other)	X		X
Capacity in DC watts and AC watts (CEC-AC and CSI Rating)	X		X
REC owner if third party	X		X
Number of inverters and inverter manufacturer(s) and model(s)	X		X
Mounting (rooftop/ground/mixed)	X		X
System output monitoring? Reporting to outside vendor or only to customer? If outside vendor then name	X		X
Tracking (fixed/single-axis/dual-axis/mixed)	X		X
If fixed, then what tilt and azimuth?	X		X
EPBB calculator production estimate	X		X
EV charging on site? If so, how many EVs?	X		X
Battery for energy storage on site? If so, date installed, make, model, discharge capacity (kW), energy capacity (kWh), and capability for remote control dispatch? Is there a dedicated meter?	X		
Decommissioned date (if applicable)		X	X
Census tract			X

Many of the fields are already included in the existing NEM application forms, or are not contentious, and thus require no discussion. Others are discussed individually below.

Customer sector:

This field currently is collected and published in the CSI database. Because this information is useful to understand how the technology is diffusing in the market, the ACR proposed and we will require a greater level of disaggregation, adding categories for industrial, educational, and military.

Contractor CSLB number:

The Contractors State Licensing Board (CSLB) maintains a database of licensed contractors, each with a CSLB number. Collecting and publishing the CSLB number would serve as a useful tool to protect consumers and to assist prospective DG buyers.

Rebate program participation:

Understanding the degree to which DG participants are receiving rebates will help the design of future rebate programs and also help the Commission to better understand the economic factors that make potential distributed generators decide to participate, with and without rebate incentives.

Dates of application, approval, and decommissioning:

This information will help the Commission to monitor the responsiveness and efficiency of utility interconnection departments, and also provide information about the on-going presence, age, and vintage of DG equipment.

Cost, ownership, and financing data:

Project cost data will help the Commission and the solar DG market understand how much and how quickly the industry is lowering installed DG costs. By requesting the amount claimed on the owner's Federal Investment Tax Credit (ITC) submission we simplify and render consistent this provision for third party owners. We will require permitting cost information in order to track the degree to which permitting authorities (e.g. municipalities) are facilitating or discouraging the diffusion of solar DG. Project financing and ownership information will likewise inform the Commission and the market about industry trends and market concentration.

REC owner if third party:

ORA recommended adding this field. Given the developing nature of the market for trading renewable energy credits (RECs), and given our interest in

well-functioning markets (and experience with markets that functioned poorly in part due to market power) we believe that knowing who owns RECs will provide the public and the Commission with valuable insight.

Equipment:

By statute,¹³ CSI applicants must use equipment which has been approved by the California Energy Commission (CEC). Utility interconnection departments are now requiring that NEM applicants use only CEC-approved panels and inverters. Because we believe this will promote consumer protections, we will require that this practice continue. The Commission will work with the CEC to ensure that the list continues to be maintained.

In comments to the ACR, SolarCity objected to the requirement to provide the exact type and number of equipment installed, explaining that this would delay installations. PG&E, however, notes that this data is important for grid reliability and safety. We will require this information, with the understanding that installers should input the equipment they expect to install, and later update the information as necessary.

System monitoring:

Because of the initial cost, most small host customer-owners in the CSI Program chose not to install monitoring equipment, even though monitoring can save the system owner money later on. We believe that system monitoring increases the effectiveness of solar DG installations by making system owners aware of decreases and even failures in system performance. At the same time, we acknowledge that monitoring is not free, and so we will not require it.

¹³ Public Resources Code 25781(c).

Nevertheless, we will track its prevalence and also those companies that provide the service.

EPBB calculator production estimate:

Our goal is to promote the long term health of the solar DG industry, and cost effective installations contribute to that. By requiring that the NEM applicant, in most cases a contractor or third party owner, provide an estimated production forecast, we encourage well situated, properly sized, and correctly installed systems.

We will not mandate any cost effectiveness thresholds, nor will we require that the utility validate input data against actual contracts. However, by requiring that applicants provide an explicit production forecast we can encourage good practices.

Tracking information, tilt, and azimuth:

The EPBB Calculator production estimate will require the input of tracking information, and tilt and azimuth for fixed orientation systems. This data will be useful for understanding installation practices and also to improve the ability to forecast the DG fleet's performance. In the ACR comments, one objection raised the scenario of larger systems with multiple arrays facing different directions. This situation is currently dealt with in the WDS by allowing simplifying inputs, which can be adopted as well for this reporting requirement.

Energy efficiency audit and measures:

We strongly believe that energy efficiency is the most cost effective and most environmentally benign way to provide energy services. Furthermore, putting energy efficiency measures into effect before sizing rooftop generation systems will affect the kinds of systems that are built. However, our experience in the CSI has shown how difficult it is to obtain accurate, useful self-reported

information of this type.¹⁴ To obtain more useful information about energy efficiency would likely require a more detailed questionnaire that would necessarily burden applicants and interconnection departments. Therefore, we will not request information about energy efficiency measures in the NEM interconnection process.

Electric vehicle presence:

By statute,¹⁵ the NEM tariff is awarded only for those systems sized to the customer's historical or expected load. Customers who have recently purchased or plan to purchase EVs often request permission to operate DG systems which are bigger than their historical load would permit. Independently, we wish to monitor the impact of EVs on the grid, as well as the correlations to rooftop PV ownership, and so we will require that NEM applicants report on the presence or impending presence of EVs drawing current at the DG's premises. Because this can be useful to understand both the DG and the EV market, we will also post this information.

Interconnected Storage:

Customers installing solar DG systems may also utilize batteries for energy storage. We wish to monitor the impact of batteries for energy storage on the grid, as well correlations to solar PV ownership. As a result, we will require that NEM applicants report on the presence or impending presence of batteries for energy storage. Because this can be useful to understand both DG and the market for energy storage, we will also post this information.

¹⁴ See the 2009 CSI Impact Evaluation Section 4.3, available here (<http://www.cpuc.ca.gov/PUC/energy/Solar/impactevaluation2009.htm>).

¹⁵ Pub. Util. Code § 2827.

Census tract:

Knowing the census tract location for DG installations will help researchers who wish to use geographic and socio-economic data to better understand how the diffusion of solar DG takes place. This information can be garnered from the addresses of system installations.

4. Future Modification to Reporting Requirements

In light of ongoing technological, regulatory and market developments, it is very possible that the reporting requirements laid out in this decision will need to be modified in the future. As a result, we will allow the utilities to file a Tier-2 Advice Letter, or Energy Division to issue a resolution to this effect if they believe changes should be made with respect to the fields which must be collected and the fields which must be supplied to the California Solar Statistics contractor.

5. Implementing this decision

The utilities shall file a Tier 2 Advice Letter within 60 days of the date of this decision providing NEM tariff changes. Within 30 days of the approval of those Advice Letters, the utilities' interconnection departments shall begin collecting the additional fields described here. The IOUs shall place into service the online application and additional appropriate behind-the-scenes tools within 120 days of the approval of the Advice Letters. Reasonable costs incurred in the development of this online application portal shall be covered by CSI program administration funds.

6. Comments on Proposed Decision

The proposed decision of the Commissioner in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice

and Procedure. Comments were filed on _____, and reply comments were filed on _____ by _____.

7. Assignment of Proceeding

Michael R. Peevey is the assigned Commissioner and Katherine Kwan MacDonald, Regina DeAngelis and Jessica Hecht are the assigned Administrative law Judges in this proceeding.

Findings of Fact

1. Customers who apply for CSI rebates provide certain information, including whether the systems are leased or owned, the cost of the systems and their components, make and model of the PV panels and inverters, whether tracking hardware is present, and the orientation of the fixed-array panels.
2. The data collected for California Solar Statistics provides invaluable information to the Commission, PAs, market participants, researchers, and the general public.
3. Publishing CSI data provides market suppliers with information about what equipment is being installed where and for how much.
4. Publishing CSI data provides DG host customers with information about which contractors are active in their area and pricing information.
5. Publishing CSI data provided information about the industry to academic researchers and journalists.
6. Publishing CSI data provides information to the electric utilities about its impact on the grid, needed resources, and the nature of their DG fleet.
7. Publishing CSI data informs the Commission and state government policy makers about new technologies and market models.
8. The majority of NEM DG is solar.

9. Each IOU has an established NEM application process. SDG&E has an online NEM application process.

10. A uniform state-wide web-based application portal is beneficial to NEM applicants who would thereby have just one interface to learn.

11. Requiring a detailed review of the contracts for purchase or lease of a PV system is a deterrent to NEM participation when applicants do not want to share detailed financial information.

12. A detailed review of the contracts for purchase or lease of a PV system will increase the work and cost of processing NEM applications.

13. Customer confidentiality is an ongoing concern of the Commission, the utilities and customers.

14. CSI protects customer anonymity by redacting names and street addresses in the data that is published in the WDS.

15. The WDS provides information about distributed generation installations.

16. The EPBB Calculator is a free online tool that estimates the annual energy production for a given location, orientation, level of shading, roof offset, and set of equipment.

17. Customer sector data is useful to understand how technology is diffusing in the market.

18. The contractor CSLB number is useful data for customer protection and assisting prospective DG buyers.

19. Rebate program participation data assists the Commission to better understand the economic factors that make distributed generators decide to participate, with and without rebate incentives.

20. The date of application, approval and decommissioning data assists the Commission in monitoring the responsiveness and efficiency of utility

interconnection departments and provides information about the ongoing presence, age, and vintage of equipment.

21. Cost, ownership and financing data of PV systems assist the Commission and solar DG market to understand how much and how quickly the industry is lowering installed DG costs.

22. REC owner data provides valuable insight to the public and the Commission.

23. Requiring equipment data promotes consumer protection.

24. EPBB calculator production estimate data will encourage good practices by contractors and applicants.

25. Data on tracking information, and tilt and azimuth for fixed orientation systems will be useful in understanding installation practices and improve the ability to forecast the DG fleet's performance.

26. Data about the presence or impending presence of EVs drawing current at the DG's premises will be useful in understanding both the DG and EV market.

27. Data on whether there is a battery for energy storage with solar PV systems will be useful in understanding the impact to the grid as well as provide information on both the DG and storage market.

28. Census tract data will help researchers to use geographic and socio-economic data to understand how the diffusion of solar DG takes place.

Conclusions of Law

1. The data collected when customers apply for CSI rebates is invaluable and should continue to be collected and published even after the CSI program winds down.

2. The value of reporting CSI data outweighs the incremental costs that both utilities and applicants will incur complying with the reporting requirement.

3. The NEM application should be used to continue collection of the CSI data.
4. PG&E and SCE should work together with SDG&E to develop a single online NEM application process backed up by appropriate tools for the utilities' internal work flow management and decision making for NEM and other customer-sited generation applications.
5. Although a detailed review of contracts for the purchase or lease of a solar PV system would ensure a more accurate database the potential deterrent to NEM participation of requiring financial information coupled with the additional work and cost involved outweigh these advantages.
6. The "15/15 Rule," a tool that the utilities use to reach a certain level of data aggregation, is applicable to the Direct Access Proceeding and is not a general rule that is legally applicable across the board.
7. Use of the EPBB calculator should be required because the information provided will serve to protect customers against uneconomic installations by forcing system installers to clearly and explicitly state the assumptions which are used by customers to decide whether or not to install a rooftop system.
8. The data fields chosen for collection through the NEM application and publication on the California Solar Statistics Website are those which should assist the Commission, utilities, researchers, property owners, and market participants in understanding the characteristics of the fleet of solar DG installations.
9. In light of ongoing technological, regulatory, and market developments, the utilities should be allowed to file a Tier-2 Advice Letter if they believe changes should be made with respect to the fields which must be collected in the NEM application and the fields which must be supplied to the California Solar Statistics contractor.

10. In light of ongoing technological, regulatory, and market developments, the Energy Division may issue a resolution if it believes changes should be made with respect to the fields which must be collected in the NEM application and the fields which must be supplied to the California Solar Statistics contractor.

11. The utilities should file a Tier-2 Advice Letter within 60-days of the date of this decision providing NEM tariff changes to implement the NEM tariff changes identified in this decision.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company shall collect the data set forth in Appendix A through each utility's Net Energy Metering interconnection application.

2. Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas and Electric Company shall work together to create a single statewide Net Energy Metering interconnection interface, which may utilize the system which San Diego Gas and Electric Company is currently using in its territory.

3. Costs incurred by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas and Electric Company (SDG&E) in developing an online Net Energy Metering interconnection application portal shall be recovered from the California Solar Initiative program administration funds. Upon expiration of the California Solar Initiative, PG&E,

SCE, and SDG&E may seek cost recovery through their respective general rate cases.

4. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas and Electric Company (SDG&E) shall file a Tier-2 Advice Letter within 60-days of the issuance of this decision providing Net Energy Metering tariff changes. Within 30-days of the approval of those Advice Letters, the interconnection departments of PG&E, SCE, and SDG&E shall begin collecting the additional data fields set forth in Appendix A into use.

5. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company shall place into service an online application and additional appropriate behind-the-scenes tools within 120 days of approval of the Advice Letters.

6. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company (collectively “the IOUs”) may transfer the data in Appendix A on a monthly basis until the automated interface is completed for all three IOUs. Upon implementation of the automated interface, the IOUs shall transfer the data to the California Solar Statistics contractor at least weekly.

7. Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas and Electric Company may file a Tier-2 Advice Letter, to request that changes should be made with respect to the fields which must be collected in the NEM interconnection process and/or those fields that must be supplied to the California Solar Statistics contractor.

8. Rulemaking 12-11-005 remains open.

This order is effective today.

Dated _____, at San Francisco, California.

APPENDIX A

Table 1: Data fields to be provided by customers and by utilities, and those to be published (where indicated that data is to be supplied by applicant and utility, the utility may decide who will be responsible)

Field	Supplied by applicant	Supplied by utility	Published on California Solar Statistics and the Working Data Set
Customer name and address	X	X	
Meter number		X	
Utility account number	X	X	
Electric tariff (prior to NEM)		X	
Customer zip, city, county	X	X	X
Name of utility		X	X
Customer sector (res/comm/ind/non-profit/educational/military/other government)	X		X
Installer name, address, email, and phone number	X		X
Contractor CSLB number	X		X
Participating in California rebate program? If so which program? Amount of rebate?	X		X
Date of interconnection application, date of approval by IOU		X	X
Customer-owned or third party-owned?	X		X
Sale price if host customer-owned. Federal ITC filed amount if third party-owned	X		X
Permitting cost	X		X
If customer-owned, was it PACE financed? If so, which?	X		X
If third party-owned, then name of owner at time of sale.	X		X
If third party-owned, then contract type (PPA/lease/pre-paid lease/other)	X		X
Capacity in DC watts and AC watts (CEC-AC and CSI Rating)	X		X
REC owner if third party	X		X
Number of inverters and inverter manufacturer(s) and model(s)	X		X
Mounting (rooftop/ground/mixed)	X		X
System output monitoring? Reporting to outside vendor or only to customer? If outside vendor then name	X		X
Tracking (fixed/single-axis/dual-axis/mixed)	X		X

If fixed, then what tilt and azimuth?	X		X
EPBB calculator production estimate	X		X
EV charging on site? If so, how many EVs?	X		X
Battery for energy storage on site? If so, date installed, make, model, discharge capacity (kW), energy capacity (kWh), and capability for remote control dispatch? Is there a dedicated meter?	X		
Decommissioned date (if applicable)		X	X
Census tract			X

(END OF APPENDIX A)